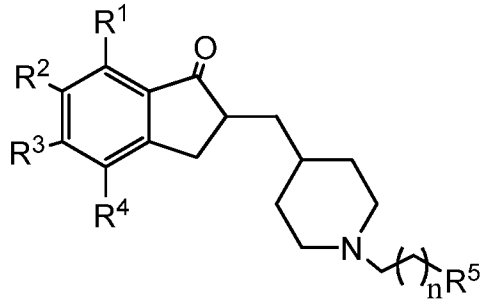
Amendments to the Claims:

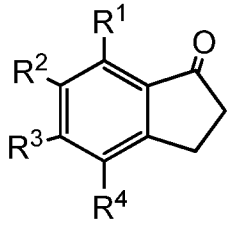
1. (Currently amended) A process for producing a ~~Donepezil derivative~~ compound of formula (I),



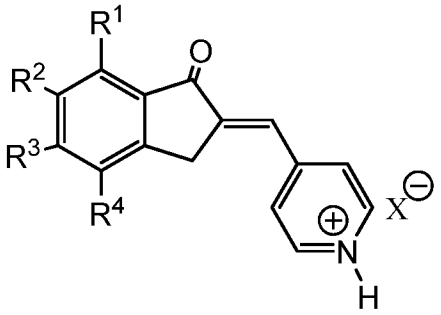
(I)

wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; R^5 represents a phenyl or a substituted phenyl; and n is ~~an integer from~~ 0 ~~to 2~~, ~~characterized in that~~ wherein the process comprises:

a) a reaction of 4-pyridinecarboxaldehyde with a compound of formula (II) in toluene or benzene to form, in the presence of a stoichiometric amount or a greater than a stoichiometric amount of a strong acid ~~HX~~ selected from an alkyl sulfonic acid, benzene sulfonic acid, a substituted benzene sulfonic acid, hydrochloric acid, sulfuric acid, nitric acid, or phosphoric acid, a compound of the formula (III);

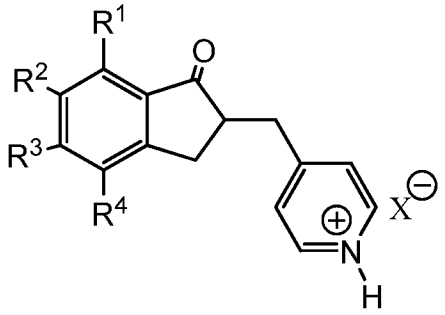


(II)

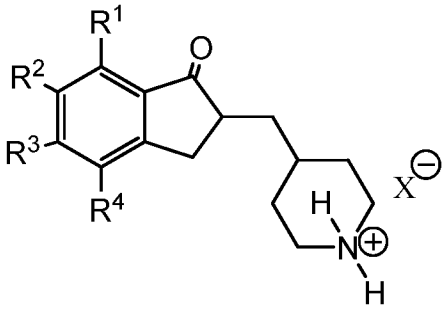


(III)

b) a catalytic hydrogenation of a compound of formula (III) or the compound of formula (V) in a solvent selected from water, an alcohol, an ether, an ester, or an organic acid to yield a compound of formula (IV); and



(V)



(IV)

c) an N-alkylation reaction of a compound of formula (IV) in the presence of base at a temperature of from about 0°C to about 150°C to yield a compound of formula (I);

wherein X^- is an alkyl sulfonate, benzene sulfonate, a substituted benzene sulfonate, a chloride, a sulfate, a nitrate, or a phosphate.

2. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I), wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having 1 to 4 carbon atoms; R^5 represents a phenyl or substituted phenyl; and n is an integer from 0 to 2, characterized in that~~ The process of claim 1, wherein a compound of formula (I) is produced by reacting a compound of formula $Y\text{-}(CH_2)_{n+1}R^5$ with a compound of formula (IV) in the presence of a base, wherein Y represents a chlorine atom, a bromine atom, or an iodine atom.

3. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I), wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; R^5 represents a phenyl or a substituted phenyl; and n is an integer~~

~~from 0 to 2, characterized in that~~ The process of claim 1, wherein a compound of formula (I) is produced by reacting a compound of formula OHC-$(CH_2)_nR^5$ with a compound of formula (IV), in the presence of a reducing agent.

4. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I), wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; HX represents an alkyl sulfonic acid, benzene sulfonic acid, a substituted benzene sulfonic acid, hydrochloric acid, sulfuric acid, nitric acid, or phosphoric acid, characterized in that~~ The process of claim 1 wherein a compound of formula (IV) is produced by the catalytic hydrogenation of a compound of formula (III).

5. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I), wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; and HX represents a strong acid, characterized in that~~ The process of claim 1, wherein a compound of formula (IV) is produced by catalytic hydrogenation of a compound of formula (V).

6. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I), wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; and HX represents a strong acid, characterized in that~~ The process of claim 1, wherein 4-pyridinecarboxaldehyde reacts with a compound of formula (II) in the presence of a strong acid ~~HX~~ selected from an alkyl sulfonic acid, benzene sulfonic acid, a substituted benzene sulfonic acid, hydrochloric acid, sulfuric acid, nitric acid, or phosphoric acid to form a compound of the formula (III).

7.-11. (Canceled)

12. (Currently amended) ~~The process according to claim 2 for the preparation of a compound of the general formula (I), characterized in that~~ The process of claim 2, wherein R^1 represents hydrogen; R^2 represents a methoxy; R^3 represents a methoxy; R^4 represents hydrogen; R^5 represents a phenyl or a 3-fluorophenyl; n is 0; said strong acid is selected from ~~HX represents~~ methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid; and Y represents a chlorine, a bromine, or an iodine.

13-14. (Canceled)

15. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I)~~ The process of claim 1, wherein within said compound of formula (III) R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, R^4 represents hydrogen~~, and HX represents~~; said strong acid is selected from methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid, wherein ~~characterized in that~~ said compound of formula (IV) is produced from a compound of formula (III) by catalytic hydrogenation, wherein the catalyst is platinum, palladium, nickel, ruthenium, or salts or oxides thereof.

16. (Currently amended) ~~The process according to claim 4 for the preparation of a compound of the general formula (I)~~ The process of claim 4, wherein within said compound of formula (III) R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, R^4 represents hydrogen~~, and HX represents~~; said strong acid is selected from methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid, ~~characterized in that~~ wherein said compound of formula (IV) is produced from a compound of formula (III) by catalytic hydrogenation, wherein the catalyst is platinum, palladium, nickel, ruthenium, or salts or oxides thereof.

17. (Currently amended) ~~The process according to claim 5 for the preparation of a compound of the general formula (I)~~ The process of claim 5, wherein within said

compound of formula (III) R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, R^4 represents hydrogen~~, and HX represents~~; said strong acid is selected from methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid, ~~characterized in that~~ wherein said compound of formula (IV) is produced from a compound of formula (III) by catalytic hydrogenation, wherein the catalyst is platinum, palladium, nickel, ruthenium, or salts or oxides thereof.

18. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I)~~ The process of claim 1, wherein within said compound of formula (V) R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, R^4 represents hydrogen~~, and HX represents~~; said strong acid is selected from methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid, ~~characterized in that~~ wherein said compound of formula (IV) is produced from a compound of formula (V) by catalytic hydrogenation, wherein the catalyst is platinum, palladium, nickel, ruthenium, or salts or oxides thereof.

19. (Currently amended) ~~The process according to claim 4 for the preparation of a compound of the general formula (I)~~ The process of claim 4, wherein within said compound of formula (V) R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, R^4 represents hydrogen~~, and HX represents~~; said strong acid is selected from methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid, ~~characterized in that~~ wherein said compound of formula (IV) is produced from a compound of formula (V) by catalytic hydrogenation, wherein the catalyst is platinum, palladium, nickel, ruthenium, or salts or oxides thereof.

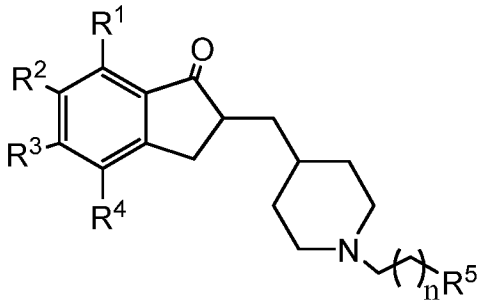
20. (Currently amended) ~~The process according to claim 5 for the preparation of a compound of the general formula (I),~~ The process of claim 5, wherein within said compound of formula (V) R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, R^4 represents hydrogen~~, and HX represents~~; said strong acid is selected from methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid,

~~characterized in that~~ wherein said compound of formula (IV) is produced from a compound of formula (V) by catalytic hydrogenation, wherein the catalyst is platinum, palladium, nickel, ruthenium, or salts or oxides thereof.

21. (Currently amended) ~~The process according to claim 1 for the preparation of a compound of the general formula (I), characterized in that~~ The process of claim 1, wherein reacting 4-pyridinecarboxaldehyde with a compound of formula (II) in the presence of a stoichiometric amount or a greater than a stoichiometric amount of methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid yields a compound of formula (III), wherein R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, and R^4 represents hydrogen.

22. (Currently amended) ~~The process according to claim 6 for the preparation of a compound of the general formula (I), characterized in that~~ The process of claim 6, wherein reacting 4-pyridinecarboxaldehyde with a compound of formula (II) in the presence of a stoichiometric amount or a greater than a stoichiometric amount of methyl sulfonic acid, benzene sulfonic acid, or p-toluenesulfonic acid yields a compound of formula (III), wherein R^1 represents hydrogen, R^2 represents methoxy, R^3 represents methoxy, and R^4 represents hydrogen.

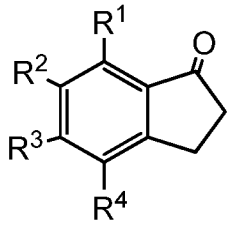
23. (Currently amended) A process for producing ~~a Donepezil derivative~~ a compound of formula (I),



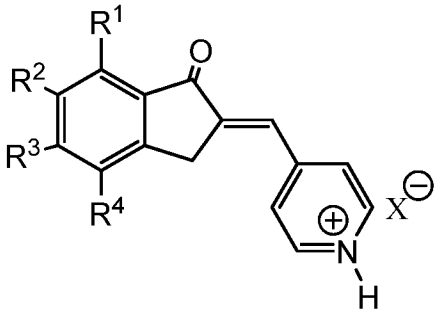
(I)

wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; R^5 represents a phenyl or a substituted phenyl; and n is 0, comprising:

a) a reaction of 4-pyridinecarboxaldehyde with a compound of formula (II) in refluxing toluene, in the presence of at least a stoichiometric amount of a strong acid selected from an alkyl sulfonic acid, benzene sulfonic acid, a substituted benzene sulfonic acid, hydrochloric acid, sulfuric acid, nitric acid, or phosphoric acid ~~HX~~, to form a compound of formula (III);

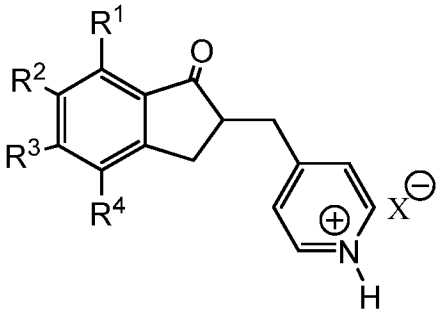


(II)

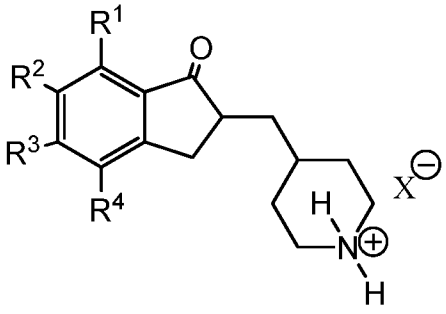


(III)

b) a catalytic hydrogenation of a compound of formula (III) or the compound of formula (V) in methanol with H_2 in the presence of Pd/C to yield a compound of formula (IV); and



(V)



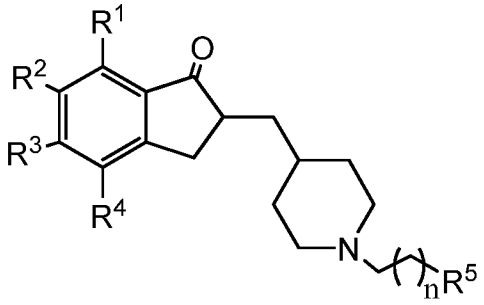
(IV)

c) a reaction of a compound of formula (IV) with a compound of formula $OHC-(CH_2)_nR^5$, wherein R^5 represents a phenyl or a substituted phenyl, and n is 0,

and with H_2, in the presence of a base and Pd/C, at a temperature of from about 0°C to about 150°C, to yield a compound of formula (I);

wherein X^- is an alkyl sulfonate, benzene sulfonate, a substituted benzene sulfonate, a chloride, a sulfate, a nitrate, or a phosphate.

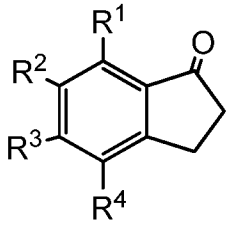
24. (Currently amended) A process for producing a ~~Donepezil derivative~~ compound of formula (I),



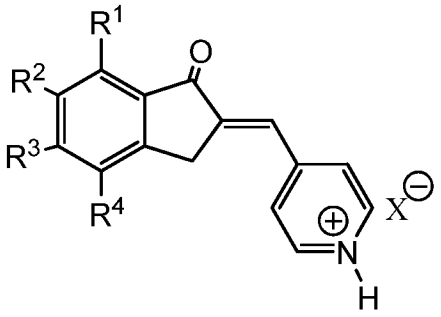
(I)

wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; R^5 represents a phenyl or a substituted phenyl; and n is 0, comprising:

a) a reaction of 4-pyridinecarboxaldehyde with a compound of formula (II) in refluxing toluene, in the presence of at least a stoichiometric amount of p-toluenesulfonic acid with respect to the compound of formula (II), to form a compound of formula (III);

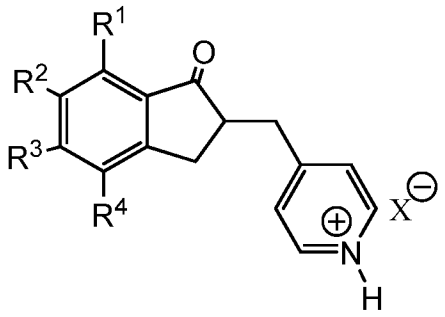


(II)

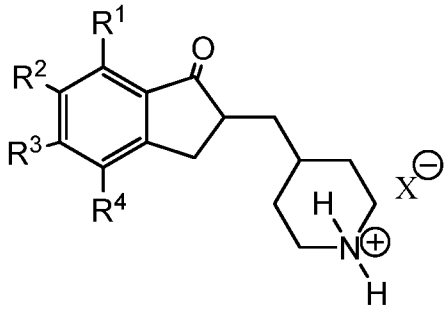


(III)

b) a catalytic hydrogenation of a compound of formula (III) or the compound of formula (V) in methanol with H_2 in the presence of Pd/C and a base to yield a compound of formula (IV); and



(V)



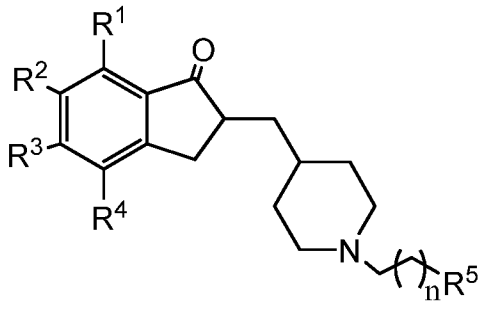
(IV)

c) a reaction of a compound of formula (IV) with a compound of formula $OHC\text{-}(CH_2)_nR^5$, wherein R^5 represents a phenyl or a substituted phenyl, and n is 0, and with H_2, in methanol, in the presence of Pd/C and a base, at a temperature of from about 0°C to about 150°C, to yield a compound of formula (I);

wherein b) and c) are carried out in situ without purification of the compound of formula (IV); and

X^- is an alkyl sulfonate, benzene sulfonate, a substituted benzene sulfonate, a chloride, a sulfate, a nitrate, or a phosphate.

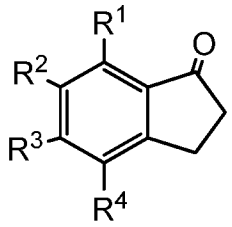
25. (New) A process for producing a compound of formula (I),



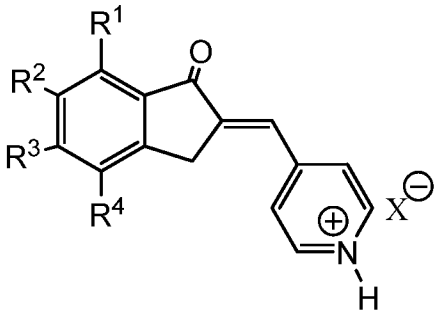
(I)

wherein R^1, R^2, R^3, and R^4 each independently represents H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; R^5 represents a phenyl or a substituted phenyl; and n is 0, comprising the following steps:

a) a reaction of 4-pyridinecarboxaldehyde with a compound of formula (II) in refluxing toluene, in the presence of a stoichiometric amount of p-toluenesulfonic acid with respect to the compound of formula (II), to form a compound of formula (III);

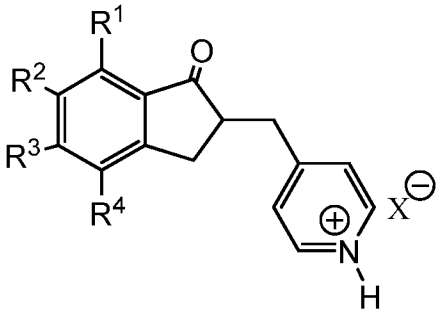


(II)

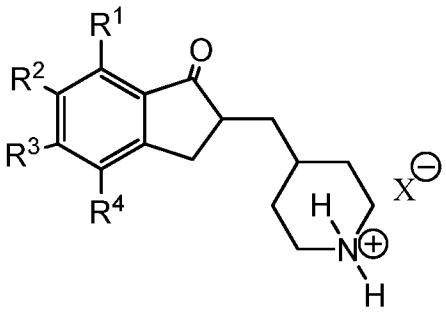


(III)

b) a catalytic hydrogenation of a compound of formula (III) or the compound of formula (V) in methanol with H_2 in the presence of Pd/C and a base to yield a compound of formula (IV); and



(V)



(IV)

c) a reaction of a compound of formula (IV) with a compound of formula $OHC-(CH_2)_nR^5$, wherein R^5 represents a phenyl or a substituted phenyl, and n is 0, and with H_2, in methanol, in the presence of Pd/C and a base, at a temperature of from about 0°C to about 150°C, to yield a compound of formula (I);

wherein b) and c) are carried out in situ without purification of the compound of formula (IV); and

X^- is an alkyl sulfonate, benzene sulfonate, a substituted benzene sulfonate, a chloride, a sulfate, a nitrate, or a phosphate.

26. (New) The process of claim 25, wherein said compound of formula (I) is produced by reacting a compound of formula $Y\text{-}(CH_2)_{n+1}R^5$ with said compound of formula (IV) in the presence of a base, wherein Y represents a chlorine atom, a bromine atom, or an iodine atom.

27. (New) The process of claim 25, wherein said compound of formula (I) is produced by reacting a compound of formula $OHC\text{-}(CH_2)_nR^5$ with said compound of formula (IV), in the presence of a reducing agent.

28. (New) The process of claim 25, wherein said compound of formula (IV) is produced by the catalytic hydrogenation of said compound of formula (III).

29. (New) The process of claim 25, wherein R^1 represents hydrogen; R^2 represents a methoxy; R^3 represents a methoxy; R^4 represents hydrogen; and R^5 represents a phenyl or a 3-fluorophenyl.

30. (New) The process of claim 25, wherein said compound of formula (IV) is produced from a compound of formula (III) by catalytic hydrogenation, wherein the catalyst is platinum, palladium, nickel, ruthenium, or salts or oxides thereof.

31. (New) The process of claim 25, wherein said compound of formula (II) is 5,6-dimethoxy-1-indanone.

32. (New) The process of claim 25, wherein steps (a)-(c) are carried out in succession and in the order listed.

33. (New) The process of claim 25, wherein in step (a) the reaction of 4-pyridinecarboxaldehyde with a compound of formula (II) in refluxing toluene is carried out in the presence of a greater than a stoichiometric amount of p-toluenesulfonic acid with respect to the compound of formula (II).